

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for determining whether to initiate a point to multipoint multicast service from a first base station of a first cell, the method comprising:

transmitting a message from a second base station in a second cell, wherein the first cell is a neighbour of the second cell, the message indicating, to user equipment positioned in the second cell, a list of cells that are neighbours to the second cell and are presently transmitting a multicast service;

receiving a user message transmitted by the user equipment positioned in [a] the second cell, wherein ~~the first cell is a neighbour of the second cell, and wherein~~ the user message includes a list of at least one neighbouring cell; and

in response to the user message[:] ~~(i) initiating, providing~~ a point to multipoint multicast service in the first cell, when the first cell is listed in the list of at least one neighbouring cell, and a point to multipoint multicast service is in use in the second cell; ~~otherwise~~

~~(ii) using a point to point multicast service in the second cell.~~

2. (Currently amended) The method of claim 1, further comprising:

transmitting, in the second cell from a the second base station, a network message to request the user equipment positioned in the second cell to provide neighbouring cell information;

wherein the user message is in response to the network message.

3. (Currently amended) The method of claim 1, wherein the list of the at least one neighbouring cell is a list of neighbouring cells the user equipment could use for combining if ~~the a~~ a multicast service is ~~initiated~~ provided in the listed neighbouring cell.
4. (Previously presented) The method of claim 1, wherein the list of the at least one neighbouring cell indicates base stations that the user equipment could use for combining if the multicast service is transmitted by the indicated base station.
5. (Currently amended) The method of claim 1, wherein the ~~list of the at least one neighbouring cell indicates base stations that the user equipment could use for combining~~ user equipment measures a point to multipoint signal of the neighbouring cells presently transmitting the multicast service.
6. (Previously presented) The method of claim 1, wherein the list of the at least one neighbouring cell indicates base stations having transmissions that the user equipment is able to demodulate.
7. (Previously presented) The method of claim 19, wherein the list of the at least one neighbouring cell indicates base stations having transmissions that the user equipment is able to demodulate.
8. (Previously presented) The method of claim 1, wherein the list of the at least one neighbouring cell indicates base stations having transmissions that the user equipment is able to detect.
9. (Previously presented) The method of claim 1, wherein the user message further includes a signal measurement for each cell in the list of the at least one neighbouring cell.

10. (Previously presented) The method of claim 9, wherein the signal measurement is indicative of at least one of a signal quality, an error rate, a received signal power level, or a signal-to-noise ratio.
11. (Original) The method of claim 9, wherein the signal measurement is indicative of a beacon signal power.
12. (Original) The method of claim 9, wherein the signal measurement is indicative of a pilot signal power.
13. (Original) The method of claim 9, wherein the signal measurement is indicative of signal power of an existing multicast transmission.
14. (Currently amended) The method of claim 1, further comprising transmitting from ~~a~~ the second base station in the second cell, an initial message to indicate to the user equipment a list of cells that are neighbours to the second cell.
15. (Currently amended) The method of claim 1, further comprising transmitting from ~~a~~ the second base station in the second cell, an initial message to wake the user equipment positioned in the second cell from an idle mode.
16. (Original) The method of claim 15, wherein the initial message is a page notification message including a set of indicators corresponding to a respective set of multicast services, and wherein each of the indicators indicates whether the second base station is transmitting an updated multicast control channel message.
17. (Original) The method of claim 2, wherein the network message includes a cause value that indicates an enhanced counting procedure is invoked for the multicast service.

18. (Currently amended) The method of claim 1, further comprising allowing the user equipment to join the point to multipoint multicast service provided by the first cell.

19. (Currently amended) A method for determining whether to initiate a point to multipoint multicast service in a group of cells in a network, the method comprising:

transmitting a message from a base station in at least one selected cell of the group of cells, the message indicating, to user equipment positioned in the at least one selected cell, a list of cells that are neighbours to the at least one selected cell and are presently transmitting a multicast service;

receiving at least one user message transmitted by a respective at least one user equipment positioned in the at least one selected cell of the group of cells in the network, wherein the at least one user message includes a list of at least one neighbouring cell and a request for multicast service; ~~and~~

for each cell of the group of cells, accumulating a first count of the user messages having the cell included in the list of the at least one neighbouring cell;

for the at least one selected cell of the group of cells, accumulating a second count of the user messages received from user equipment in the cell; and

when the first count for a cell is not zero and the second count for the at least one selected cell is above a threshold number, initiating a point to multipoint multicast service in both cells.

~~for each cell of the group of cells, initiating the multicast service in the cell, and if the first count for the cell is not zero;~~

~~for each cell the of the group of cells, accumulating a second count of the user messages received from user equipment in the cell; and~~

~~initiating the multicast service in a cell if the second count for the cell is not zero, wherein initiating the multicast service in a cell if the second counter for the cell is not zero includes:~~

~~(i) initiating a point to point multicast service in the cell if a sum of the first count and second count is less than a threshold number; and~~

(ii)₃ initiating a point-to-multipoint multicast service in the cell if the sum of the first count and second count is greater than the a threshold number.

20. (Canceled)

21. (Cancelled)

22. (Currently amended) A method for determining whether to initiate a point to multipoint multicast service in a group of cells in a network, the method comprising:

transmitting a message from a base station in a selected cell, the selected cell either being one of the group of cells or a neighbour of at least one of the group of cells, the message indicating, to user equipment positioned in the selected cell, a list of cells that are neighbours to the selected cell and are presently transmitting a multicast service;

receiving at least one user message transmitted by a respective at least one user equipment positioned in the group of cells in the network selected cell, wherein the at least one user message includes a list of at least one neighbouring cell and a request for multicast service;

for each cell of the group of cells, accumulating a first count of the user messages having the cell included in the list of the at least one neighbouring cell;

for each cell of the group of cells, initiating ~~the multicast service in the cell if the first count for the cell is not zero;~~

~~wherein initiating the multicast service in a cell if the first count for the cell is not zero includes:~~

~~initiating a point-to-point multicast service in the cell if the first count is less than a threshold number; and~~

~~initiating a point to multipoint multicast service in the cell if the first count is greater than the threshold number, and;~~

initiating or maintaining a point to multipoint multicast service in the selected cell when the first count is greater than the threshold number.

23. (Currently amended) A method to assist in determining whether to initiate a point to multipoint multicast service within a mobile radio network, wherein user equipment is positioned in a first cell of ~~a first base station having~~ a group of neighbouring cells, the method comprising: transmitting a message from a base station in the first cell, the message indicating, to the user equipment, a list of cells that are neighbours to the first cell and are presently transmitting a multicast service;

determining, for each neighbouring cell in the group of neighbouring cells, whether the user equipment can detect the neighbouring cell;

generating a user message indicating which of the neighbouring cells the user equipment can detect;

transmitting the user message; and

receiving a network message generated responsive to the user message, wherein the network message indicates a new transmission of a point to multipoint multicast service by a second base station in a second cell of the group of neighbouring cells; wherein the second cell is indicated in the user message.

24. (Currently amended) The method of claim 23, further comprising:

receiving a first signal from the first base station, the first base station transmitting the point to multipoint multicast service;

receiving a second signal from the second base station transmitting the point to multipoint multicast service; and

combining the first and second signals.

25. (Currently amended) The method of claim 23, wherein a base station transmission that the user equipment can detect is combined if the point to multipoint multicast service is enabled on the base station.

26. (Canceled)

27. (Currently amended) The method of claim 23, wherein the method further includes:

determining a signal measurement for each of the neighbouring cells;

wherein the user message further includes the signal measurement for each of the neighbouring cells.

28. (Currently amended) The method of claim 23, wherein the method further includes:

determining a signal measurement for each of the neighbouring cells that are detected;

wherein the user message further includes the signal measurement for each of the neighbouring cells that are detected.

29. (Original) The method of claim 28, wherein the signal measurement is indicative of a received beacon signal power.

30. (Original) The method of claim 28, wherein the signal measurement is indicative of a received pilot signal power.

31-37. (Cancelled)

38. (Currently amended) A method to initiate a point to multipoint multicast service in a group of cells neighbouring a first cell, the method comprising:

transmitting a network message to initiate a response from a user equipment in the first cell;

transmitting a message to the user equipment in the first cell, the message indicating a list of cells that are neighbours to the second cell and are presently transmitting a multicast service

receiving a user message transmitted by the user equipment positioned in the first cell;
and

in response to the user message, initiating the point to multipoint multicast service in only the group of cells neighbouring the first cell.

39. (Currently amended) The method of claim 1, wherein the list of the at least one neighbouring cell comprises a list of neighbouring cells capable of providing a point to multipoint multicast service if that service were to be requested by a UE.

40. (Cancelled)